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**AIR UNIVERSITY**

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**FM 100-20 THE PATH TO AN INDEPENDENT AIR FORCE?**

**by**

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**Group Captain, RAF**

**A RESEARCH REPORT SUBMITTED TO THE FACULTY**

**IN**

**FULFILLMENT OF THE CURRICULUM**

**Advisor: Dr. J. Mowbray**

**MAXWELL AIR FORCE BASE, ALABAMA**

**7 April 1994**

## INTRODUCTION

The nature of close air support (CAS) operations with airmen has always, and to an extent, continues to be, an "uncomfortable" mission. The fear is that air power will be constrained by this mission, subordinated to the role of extended artillery and doctrinally tied by the whim of a ground commander. The sensitivity of this issue was recently highlighted by the heated debate between advocates of the overall use of air power during "Desert Storm", in particular with regards to the employment of Marine air.

Airmen have frequently been accused of possessing an overall vision of the "primacy" of air power that has failed to live up to its expectations. There is no doubt that this was a valid criticism in the past, and that only now, with the advent of smart weapons, are capabilities matching the promise. However, on a par with an over optimistic vision there has always been a mistrust that if air power was seen just as another weapon system, its inherent flexibility would not be exploited, and it would suffer from poor strategic utilization. This fear is most acutely felt in the use of air power in direct support of ground operations.

In order to carve out a distinctive role for air power, the concept and employment of the long range bomber, with a unique strategic role unhindered by other requirements, dominated air

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power thinking between the two world wars. In part, I believe, this strategic use of air power was driven by the wish for independence from army control of all air operations, and provided the seeds for an independent air force. But how to remove the apparent shackles with air power in direct support of ground operations?

During the World War Two battles in the Western Desert, 1941-43, a British airman, Air Marshal Coningham, was regarded as the architect of air doctrine on tactical air operations<sup>1</sup>. He provided logical and clearly defined principles on the use of tactical air power. Importantly, Coningham's stand on a centralized air command with co-equal status between air and ground commanders was a significant change in emphasis, employment and coordination of tactical air power with the army.

Although these concepts were not initially accepted by the US War Department, they later became enshrined under FM 100-20 "The Command And Employment Of Air Power", published on 21 July 1943. I contend that this document was the needed tool to remove the restraints of army control over aviation and was the real declaration of independence by the US Army Air Force (AAF). With this doctrine the AAF at last possessed the means to unshackle the close restraints posed by ground commanders, particularly

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<sup>1</sup> Lt. Gen. "Pete" Quesada, commander of the XII Fighter Command for most of the African campaigns, stated years later: "Coningham was the first senior air force guy who established tactical air doctrine as supportable doctrine that almost everybody accepted. Coningham is the architect of it" - Case Studies in the Development of Close Air Support; Cooling, p.185.

with regards to the employment of tactical air power in support of ground forces.

In this paper I will review the development of tactical aviation in the US, its limitations and prejudices, prior to the acceptance of FM 100-20. I will consider the rush to accept Coningham's use of tactical air power in light of furthering the cause of an independent air force, and my opinion on how this affected CAS operations. Finally, I will relate to this historical experience, to determine how we as airmen can better utilise the continuing employment of air power, in support of ground operations.

#### EARLY EXPERIENCE WITH CLOSE AIR SUPPORT

Initial experience with CAS was gained during World War One. Early psychological success brought about by the appearance of aircraft over the front lines appeared to provide a good capability, although little effective damage was done by these lightly armed aircraft. However, as the war progressed this pure emotional reaction to aircraft over the battlefield tended to decline. By the end of the war, ground attack aircraft could no longer expect successes they had earlier enjoyed in close support, and their missions had become far more hazardous<sup>2</sup>. High

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<sup>2</sup> Few statistics, other than those from the Royal Flying Corps, have survived from world war one. As an example, squadrons engaged in the Cambrai fighting during November 1917 suffered about 30 percent casualties daily - Cooling, p.23.

casualty rates to ground fire also lessened airmen's enthusiasm for this mission. This increased danger to aircraft involved in ground attack led to a search for aircraft, and tactics, better suited to such combat.

During the late 20's and early 30's, aviation in support of ground forces continued to occupy the thoughts of the US Air Corps and at the Tactical School. However, there remained a fundamental difference in opinion between the air and ground commanders on the control and objectives of such missions. The Tactical School favored overall control of all the attack forces under one organization, with first priority being control of the air. Conversely, the ground commanders were more concerned with local and tactical employment of air power in direct support of ground forces, (to an extent, this issue still continues to focus the differing views). Somewhat surprisingly, early on, one of the most emphatic champions of a specialized branch of aviation for ground attack was General "Billy" Mitchell. However, the most influential teacher of attack aviation at this time, and the individual who provided most doctrine on aviation in support of ground forces, was Captain George Kenney<sup>3</sup>.

Shifts in US doctrinal emphasis continued in the thirties. Although the theory of attack objectives and tactics remained

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<sup>3</sup> In the late twenties the attack aviation instructor, Capt Kenney, was heavily involved in the ground attack role. During an interview years later, he stated that he taught attack aviation and wrote the textbook on it - Cooling, p.46.

virtually as written by Kenney, it was felt overall that the risk to aircraft and aviators from small arms fire remained too great. Additionally, the development of appropriate attack aircraft was given little priority, further confused by the differing views as to what constituted their desired design characteristics. The gulf over the employment of tactical air power by the ground and air forces remained. Major W. Carter, while a student at the Army War College in 1938, clearly defined this divergence in a carefully prepared paper. He pointed out that there existed two main schools of thought relative to the employment of air power: one held that the primary role was immediate support of the ground forces; the other that it was long range strategic operations. The latter view was the basis of instruction given at the Air Corps Tactical School, while the former was taught at the Army War College<sup>4</sup>.

The shortcomings in attack aviation, doctrine and equipment, were also largely due to the overriding emphasis placed upon strategic bombardment. With the appearance of new aircraft such as the B-17, the bomber appeared to realize the potential for air power felt by airmen at the time. This was the capability of having a true strategic role that would measure up to the vision and promise of air power. I believe that one of the reasons that the main emphasis of air thinking was focused on the bomber was for this independent role, unrestrained by the confines of Army

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<sup>4</sup> Memo for Asst. Cndt. AWC from Maj. W. R. Carter, Employment of Army Air Forces, 12 Apr. 1938. Doctrines of the AAC, 1917-1938 - The Development of Air Doctrine in the Army Air Arm 1917-1941; Greer, p.79.

ground doctrine. The bomber provided the means to achieve an independence, and in the eyes of airmen, would realize the whole range and inherent flexibility of air power. By focusing on the bomber, and its clearly independent role, attack aviation was given a subsidiary role and largely sidelined.

The clouds of war were again returned to Europe, and new lessons over the tactical aircraft employment of aircraft were emerging. However, because this use of air power had been relegated to a poor second place, little had changed in US thinking. The doctrine at the time clearly put the employment of such aircraft under the command of the ground force commander. This doctrine had been opposed by the aviators, so how to force a change in thinking?

#### **THE KASSERINE EXPERIENCE**

Largely in response to perceived lessons from the first two years of war in Europe, on April 9, 1941 the War Department published FM 31-35, "Aviation in Support of Ground Forces". This manual set out the doctrine to be employed by the AAF in support of ground units. Targets to be attacked from the air were to be selected by the ground force commanders. Requests for air support were transmitted via the ground forces' chain of command until they reached the headquarters, which contained the air



support cell commanded by an AAF officer<sup>5</sup>. Ultimately, the authority on whether or not an air support mission would be ordered still rested with the corps commander. Under this system of command and control, the ground force commander, at division, corps, or army level, almost totally controlled supporting aircraft. Not surprisingly, this doctrine did not meet with the air officer's approval.

Following the invasion of North Africa in November 1942 (operation TORCH), Allied forces raced eastward in an attempt to seize Tunis. The US forces comprised II Corps, accompanied by XII Air Support Command (ASC) under Col P. Williams. Following the principles under FM 31-35, the II Corps and XII ASC representatives were soon at loggerheads over the quality of air support provided. Information transfer between II Corps and the ASC was deficient, which resulted in the lack of adequate coordination and control. Frequently, the ASC did not find out about Army requirements until after the event, and the Army complained about its vulnerability to German air attack. Restrained by perceived Corps needs, the ASC was not at liberty to undertake the sort of counter air missions which might have eliminated German air strikes-attacking their airfields. Instead ASC operations tended to be wasted on small scale attack operations which produced little results and persistent losses<sup>6</sup>.

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<sup>5</sup> The AAF officer in charge of the air support cell evaluated the request and consulted with the corps commander as to the practicality and the execution of the mission - Cooling, p.156.

<sup>6</sup> Air War College Military Studies Course, AY 1993-1994 - MS 610, p.13.

The end result was a breakdown in trust between the ASC and II Corps, with airmen feeling increasingly frustrated by perceived restriction binding them to the land forces, coupled with a nervousness that they were as likely to be fired upon by "jittery" friendly forces.

This condition proved the perfect cocktail for failure, and this occurred in mid-February 1943 when Field Marshal Rommel launched a surprise counter attack westward towards Kasserine Pass. German armor, supported by aircraft, rapidly advanced at such a pace that they threatened to collapse the whole Allied position in Tunisia. The ASC involvement during the battle was negligible, and they played little part in the action<sup>7</sup>, which proved a crushing defeat for the Allies. The Kasserine fiasco occurred in the midst of major Allied command and control changes, designed primarily to remedy the breakdown in trust over air-ground cooperation. The events at Kasserine served as a spur to the Allied efforts to improve the air ground communication, and proved the demise of FM 31-35.

#### AIR CHIEF MARSHAL CONINGHAM

It was during the early period of the desert campaign that (then) Air Vice Marshal Coningham was credited with creating the successful air doctrine for tactical air operations. In July

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<sup>7</sup> Report on Operations Conducted by XII Air Support Command, USAAC, Tunisia, 13 Jan 43 to 9 Apr 43. Held in the archives of the Historical Research Center, Maxwell AFB.

1941 Britain's position in the Middle East was weak, and the Germans were threatening Egypt. At this time, Air Marshal Tedder, then head of Middle East Air Command, summoned Coningham to take command of 204 Group in the Western Desert. All three British services were hard pressed, short of modern equipment and experience. Tedder's last word to Coningham during his briefing in Cairo was to emphasize joint Army-Air cooperation. With the formation of the 8th Army in September 1941, a joint Army-Air Headquarters was formed in line with Tedder's guidance. Coningham wrote: "This decision was of fundamental importance and had a direct bearing on the combined fighting of the two services until the end of the war<sup>8</sup>".

At the same time Prime Minister Churchill ruled, in response to Tedder's policy arguments: "That ground forces must not expect as a matter of course to be protected against aerial attack. Above all, the idea of keeping standing patrols of aircraft over moving columns should be abandoned. It is unsound to distribute aircraft in this way and no air superiority will stand any large application of such a mischievous practice. Whenever a battle was in prospect the army commander was to specify to the air commander the tasks he wanted performed both before and during the battle, but it was for the air commander to decide how best to carry them out"<sup>9</sup>. This was the fundamental

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<sup>8</sup> The Army responded to Tedder's initiative and agreed to set up a joint Army-Air Headquarters when the 8th Army was formed in September 1941 - A Biography of Air Marshal Sir Arthur Coningham; Orange, p.79.

<sup>9</sup> Orange p.79.

statement of doctrine relative to the utilization of tactical air support. These rulings were widely publicized and a joint Army-RAF directive on direct air support was issued on 30 September 1941<sup>10</sup>. Coningham was given the mission of implementing this directive.

These initiatives were not universally welcomed, as the correspondence in September from Air Marshal Portal (Chief Of Air Staff) to Tedder indicated: "The feeling persists in the highest levels that the Air ministry are not sympathetic to the Army's requirements in air support, and criticism would redouble unless - we put up a thoroughly good effort when the time comes"<sup>11</sup>.

There is no doubt that Coningham established a sound rapport with the Army and was able to correctly implement the agreed doctrine as the desert campaign progressed. This is shown by continuing correspondence between Portal and Tedder, 21 July 1942: "What you tell me about Army cooperation is of extraordinary interest and very helpful in our arguments here. So few people realize that cooperation must be mutual and that subordination is not what is required to achieve it"<sup>12</sup>. Tedder agreed, sending Portal copies of an exchange between General Auchinleck (Commander-in-Chief, Middle East) and Coningham which illustrated that essential mutual respect.

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<sup>10</sup> AC 71/9/109.

<sup>11</sup> Orange, p.79.

<sup>12</sup> Orange, p.105.

## CONINGHAM'S IMPACT

Following Kasserine a new command structure for the Allied forces was implemented. The Northwest African Tactical Air Force (NATAF) was formed, with the mission to support Allied ground operations. NATAF was commanded by Coningham, with Brigadier General L. Kuter AAF, his deputy. With his previous experience, and the support of Generals Alexander (CinC 18 Army Group) and Montgomery (8th Army), Coningham was able to promote his proven doctrine. Coningham summarized his aim and method on 2 March 1943: "My aim is to give maximum aid to our armies; my method is to use air power correctly. We are not, however, a substitute for nor an appendage of land operations, and, particularly with small formations, the laws of weather, darkness and topography make it necessary that the army should rely on its own fighting qualities"<sup>13</sup>. He also stated that the air offensive was inherently more protective to ground forces.

Coningham's principles for the employment of tactical air power in NATAF received resolute backing from the flamboyant commander of the British Eighth Army, Gen Montgomery. He contended that aircraft should be centralized under the command of an air force officer who worked in conjunction with the commander of the ground forces, quoting his previous experience

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<sup>13</sup> Orange, p. 141-2.

at EL Alamein as an example. In supporting Montgomery's comments, Coningham summed the situation with remarks that would ring appropriate to "Desert Storm", almost four decades later: "The soldier commands the land forces, the airman commands the air forces, both commanders work together and operate their respective forces in accordance with the combined Army-Air plan, the whole operation being directed by the Army commander"<sup>14</sup>.

This support over the employment of tactical air power by the British Army commanders was not lost on the AAF commanders who, until this time had been frustrated by the old doctrine embodied in FM 31-35. Naturally, they give their wholehearted backing to Coningham's doctrine, which they also saw as confirming the long held beliefs within the Air Corps Tactical School over the need to establish air superiority, before embarking on other missions such as interdiction and CAS.

The Tunisian campaign that followed proved the worth of the NATAF air doctrine. Kuter left for Washington on 13 May for a new appointment as Hap Arnold's planning chief; he took with him a report which was an indictment of the handling of air power before the reorganization in February 1943, and which concluded: "A modern battle is not fought or won by ground force alone or by a naval force alone. Any modern battle to be successful consists of a battle in the air which must be won before the surface

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<sup>14</sup> Talk given by Air Vice Marshal Coningham, Tripoli, Feb 16, 1943 - Cooling, p.173.

battle begins"<sup>15</sup>.

#### BIRTH OF FM 100-20

Following the Kasserine experience, and conscious of the support for Coningham's philosophy over the employment of tactical air power, Eisenhower (then Allied CINC North Africa) assembled a study group of air and ground officers to examine the overall doctrine and prepare a new draft field manual on air power; this provided the framework for FM 100-20.

On his arrival at back in Washington, Kuter, ready to embark on a crusade for a new doctrine on air power, found he was pushing at an open door. Under the directive of General Marshall, the US Army's Chief of Staff, FM 100-20, "Command and Employment of Air Power", was published on 21 July 1943. FM 100-20 would shape the way the AAF employed its tactical air forces for the remainder of the war. These events were to have a profound effect on the tactical doctrine and organization of the AAF, as well as its relations with the US Army ground forces.

In bold letters, FM 100-20 opened with, the then quite provocative words: "LAND AND AIR POWER ARE CO-EQUAL AND INTERDEPENDENT FORCES; NEITHER IS AN AUXILIARY OF THE OTHER." It continued in the same vein over the doctrine of employment: "THE

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<sup>15</sup> Kuter diary and papers - Orange p. 155.

**GAINING OF AIR SUPERIORITY IS THE FIRST REQUIREMENT FOR THE SUCCESS OF ANY MAJOR LAND OPERATION."** For the employment of Tactical Air Power, CAS was given the least priority (third). Before engaging on this mission the necessary degree of air superiority was to be accomplished, and the battlefield was to be isolated through interdiction<sup>16</sup>.

#### **DECLARATION OF INDEPENDENCE**

There can be no denying that FM 100-20 was born from the frustration felt by AAF airmen over their previously shackled doctrine. Equally, it can also be regarded as the realization of the views, long unsatisfied, formed by aviators during the 1920's and 30's. As a result, it was written in an unyielding, victorious style.

FM 100-20 was viewed with some concern by ground forces, and was seen as being highly controversial. The view of the ground forces was that FM 100-20 was the AAF's declaration of independence. They believed the an unrestrained AAF would concentrate on the strategic vision of air power, and that the needed mission of CAS would be largely ignored.

In reality, the doctrine outlined in FM 100-20 proved effective for tactical air operations throughout the remainder of

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<sup>16</sup> FM 100-20, p.1, and 10-11.



the Second World War. However, the seeds of mistrust had now been sown; this would ultimately lead to the creation of another separate air arm within the Army, tasked solely with providing organic CAS for use with, and commanded by, the ground forces.

So was FM 100-20 the final declaration of independence by the AAF? I believe the past experience proved this to be the case. Other nations, realizing the potential of air power, had already established independent air forces, and this was not lost on the visionaries in the US. Early technical inability to realize the full potential of air power prevented the endorsement of a strategic goal for an air force. As a result they remained shackled by ground commanders. To break free from this restraint, the early pioneers concentrated on the one aspect of aviation free from such restraint, namely strategic bombardment. They were not alone in this, as there were many other world's air exponents proclaiming the bomber as the ultimate weapon. However, this focus of effort meant that little attention was devoted to the air/ground mission, and the doctrinal issues were set aside. Later, the AAF's emphatic support of Air Marshal Coningham's views, followed by the production of FM 100-20, at last provided the tool to remove the remaining restrictions preventing the all embracing strategic employment of total air power. This juncture was clearly the pivotal moment to declare the unique and independent role of the air force.

## **FUTURE FOR AIR POWER IN SUPPORT OF GROUND OPERATIONS**

As shown, the history of CAS has been frequently marked with distrust, and a lack of understanding between the competing interests of air and ground commanders. For the airman it is seen in the context of the overall strategic air battle, and for the ground force commander, a vital weapon for the immediate tactical ground battle. The acceptance of Coningham's philosophy of employment of tactical air support, within the overall theatre air battle, proved successful during World War Two in Europe. However, the publication of FM 100-20, although understandable, clearly caused alienation and concern amongst the ground forces, exacerbating the distrust.

The nature of the CAS mission varies dramatically, and is subject to many factors. Terrain, weather, communications, enemy fire, friendly fire, assets, ground forces posture - defensive/offensive, air superiority and timing, are some of the most important. The campaign that proved hugely successful in the desert may be entirely inappropriate in the jungle. It is the air mission that requires greatest flexibility in mode of operation, clearest communication between air and ground forces, and exposes the airmen to the greatest risk. Setting procedures in tablets of stone with rigid doctrine fails to meet the needs of this mission. In many ways this rigid, rule bound approach was to blame for the early failures, and misunderstanding,

between air and ground component commanders.

Perhaps the essential element in optimizing the use of air power for CAS is the communication and understanding between the individual commanders of their requirements, capabilities and limitations. I believe this was the most important lesson that Air Marshal Coningham taught; more significant than his philosophy on the employment of tactical air power. Unfortunately, this has also been the first lesson to disappear once the issue falls into parochialism and inter-service rivalry. Experience has also shown that local organizations and procedures developed in the heat of combat have frequently proven effective in meeting individual requirements.

The recent experience of "Desert Storm" has been proclaimed as the coming of age for air power. Yet even this very successful strategic air campaign stumbled into some of the old parochial issues regarding CAS, and the requirements of the unified air commander conducting all air support missions. How heated would the debate have been if the coalition forces not enjoyed total air superiority, and an abundance of assets? Perhaps even more importantly, is not falling into the trap of using this one campaign as a model for future tactical and CAS missions, and rewriting another volume of doctrine covering the lessons learned. The circumstances over future skirmishes will inevitably be subject to differing factors, which will effect the

specific employment options for CAS. Nevertheless, the common thread remains the need for commanders at all level, from different services, to be aware of the limitations and capabilities of air power in the CAS role, in the context of the overall theatre objectives. Communicate and do not fall back on entrenched views is the only workable doctrine for CAS.

For air forces the need for centralized control of air power, including that allocated to CAS, has proven efficient and effective. However, this should not be taken as a license to determine a cause of action outside of the aims of the combined arms force. Circumstances could dictate that CAS was the most vital mission, that required the highest priority for air power. For this reason, falling back on doctrine, such as that embodied in FM 100-20, would be wrong. What should be exploited is the flexibility of air power as a tool in the armory, able to strike at the vital point, be it CAS, interdiction or strategic bombing.

## CONCLUSION

The history of military aviation in the US has been one of over optimistic vision on the capabilities of air power, and a sense of frustration over what was considered to be a constraining influence from the other services over the employment of such air power. This has been most acutely felt in CAS, which by its very nature needs to be closely integrated into

the land battle and naturally subjected to the ground commanders requirements. The inability of ground commanders to see the overall strategic role of air power was matched by the unenthusiastic response by air commanders to participate in what was seen as a high risk, little reward mission.

In part, to remove the stultifying control by ground commanders, the AAF concentrated on developing a strategic mission using the long range bomber. It was not until the debacle at Kasserine, during the North African campaign in World War Two, that a new philosophy for the employment of tactical air forces was thrashed out. This doctrine, embodied in FM 100-20, was based on the example set by Air Marshal Coningham, supported by the British Army. Because of their previous frustrations over the employment of tactical air power, the doctrine was enthusiastically welcomed by the AAF, and proved successful. I believe this was also the key element in the AAF being able to break free from the control of the Army, and set an independent course for a separate service.

This enthusiastic embrace by the AAF of FM 100-20, and its rather provocative tone, alarmed the ground forces, who believed it would reduce CAS to a subsidiary role. Ultimately, this created a rather entrenched attitude by each service, with each seeking alternative means of achieving the CAS mission. CAS is probably the most difficult mission to coordinate, and is subject

to numerous influences over its employment. At the time, the ready endorsement of FM 100-20, with its unwritten agenda of final independence for the AAF alienated the Army, and it can be argued, did not serve the best interests of the CAS mission.

In looking to the future, I believe that communication between all commanders is the vital factor in achieving the best for the CAS mission. Air power is used most efficiently if centrally controlled and coordinated. This issue is clearly stated in the Joint Force Air Commander's (JFACC) Primer<sup>17</sup>. However, to an extent, the publication of the JFACC Primer by the air force is being viewed with a degree of suspicion by the other services; although not edited in the provocative style of FM 100-20, there remains the belief that the air force is dictating its terms. To resolve this discomfort I believe that it beholds airmen to be sensitive to this feeling. In particular, it is vital that airmen are clearly aware of the overriding requirements of the Joint Force Commander (JFC), and that we only regard air power in the context of the whole air/land/sea battle. For CAS missions the key really is flexibility, and it would be wrong to fall back on rigid doctrine based on previous experience.

It has been claimed that the lack of dialogue between air and ground leaders had a more serious effect on the evolution of

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<sup>17</sup> Unity of effort through centralized control of theater air assets is the most effective way to employ air power - JFACC Primer, February 1994, p. 1.2.

CAS than on any other aspect of air power<sup>18</sup>. If the lessons of the past have anything to offer, it must be that parochialism is over - its time to focus on the job and not the tools of the trade.

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<sup>18</sup> Cooling, p. 58.

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